BEREC Fact finding report on connectivity, competition and regulatory highlights in different jurisdictions

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Introduction

Compare the evolution of fixed and mobile broadband services in the EU as a whole + top EU performers, with the situation in other jurisdictions. When possible: EU-27, UK, USA, Canada, China, South Korea, Japan, Australia

Aspects/indicators we look at:

- Fixed and mobile coverage and penetration; urban/rural divide
- Pricing + QoS
- Consolidation trends and implications for telecoms
- Telecommunications access regulation highlights
- Financial indicators

Main sources of data:

- International public institutions: EC, OECD, ITU
- National regulators as FCC (USA), MIC (Japan), CNNIC (China)
- Data providers and industry: FTTH Council, GSMA, Ookla
- Financial and economic analysts: S&P, Fitch, Telecompaper, Felten et al.

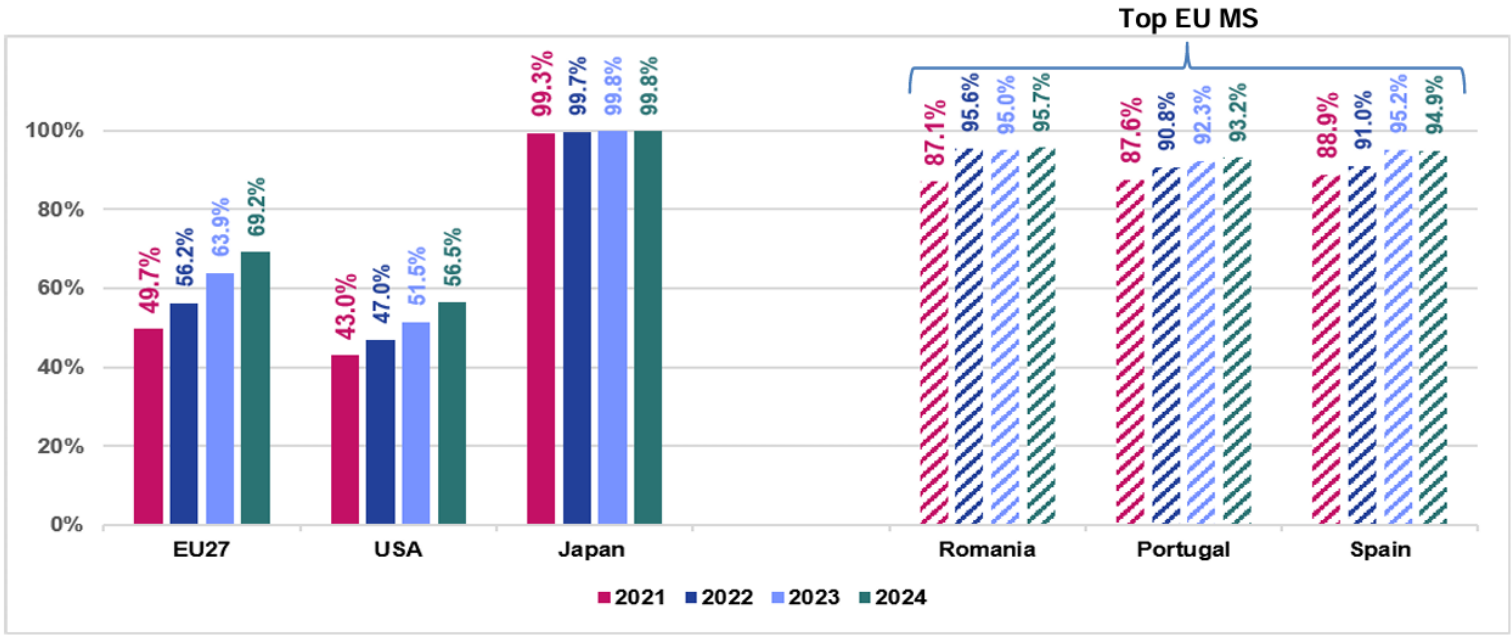
Networks coverage and services take-up

6 key indicators currently included (top EU performers are world leaders):

- FTTP coverage (EU/USA/Japan) and FTTP penetration (9 jurisdictions)
  - EU coverage is 69%, higher than in the USA (56%), but far from Japan (100%).
  - EU penetration is 40%, higher than USA (~29%), far from Japan (71%), high variability among EU MS.
- Subscriptions with speeds ≥100 Mbps (EU/USA/China) & ≥1Gbps (5 jurisdictions)
  - EU subscriptions of at least 100 Mbps (72%) remain below China (95%) and the USA (82%).
  - The EU has a high share of ≥1 Gbps subscriptions (10% in 2024), ahead of the USA (9%) and Korea (7%).
- 5G coverage (8 jurisdictions)
  - EU 5G coverage reached 94%, comparable to the USA and China (both 96%), while Korea remains at 100%.
- Mobile data traffic (7 jurisdictions)
  - Mobile data traffic is used as an indicator of network quality, and EU monthly traffic (15GB) is comparable to the USA (16GB) or Korea (17GB).

Networks coverage and services take-up

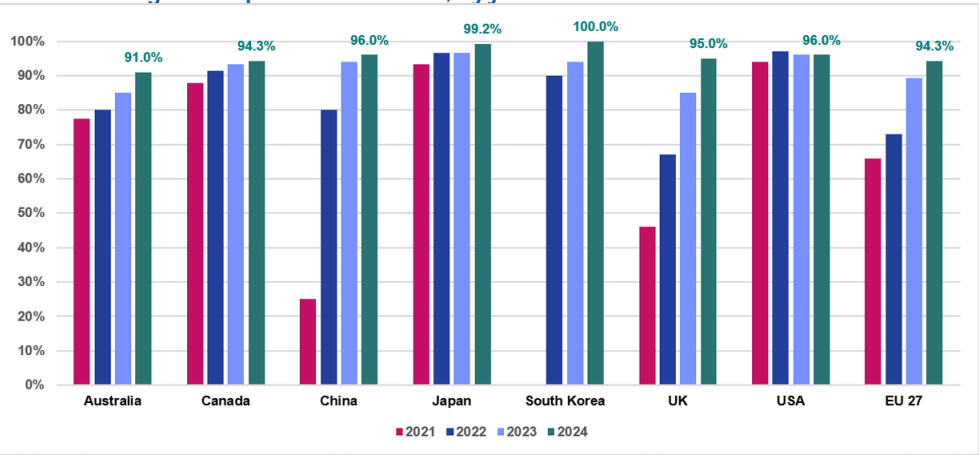
Figure 1 – Evolution of FTTP coverage in the EU27, the USA, Japan, Romania, Spain and Portugal, in the period 2021 – 2024



Source: DESI[11], FCC and other sources[12], Japan's Ministry of Internal Affairs and Communication[13]

Networks coverage and services take-up

Figure 5 – 5G coverage in the period 2021 – 2024, by jurisdiction



Source: 2021-2023: the data are from ITU datahub[34], except for the EU27 (EU 5G Observatory[35]); for 2024, the data are from ITU Datahub, except for Australia, Japan, the U.K. and the EU27 (these are from the EU 5G Observatory)

As of 2024, eight EU MS had already reached 100% coverage in 5G, which is six years before the 2030 target date.

(CY, DK, MT, NL, AT, GR, LT, LU)

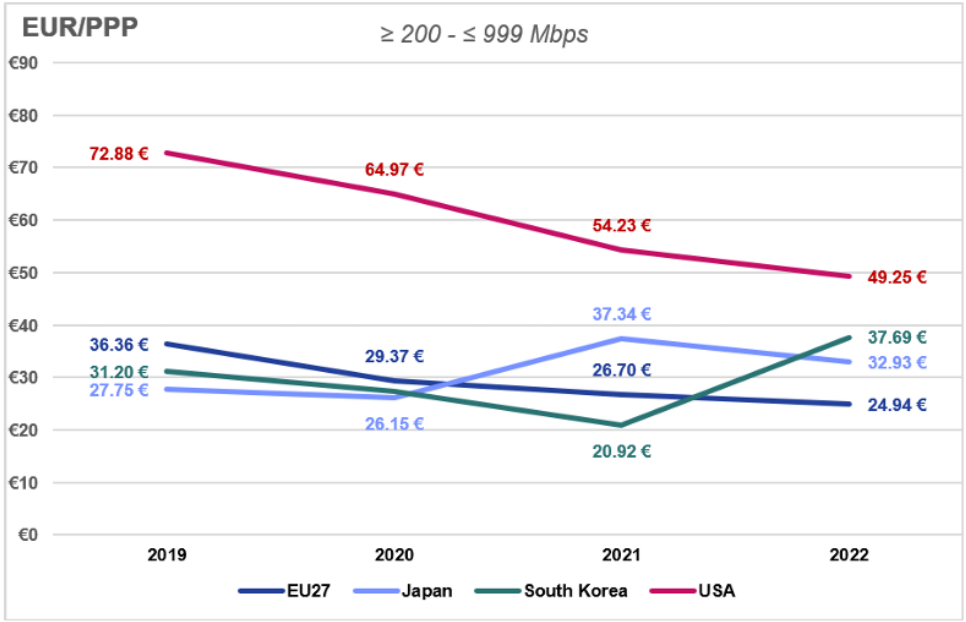
Pricing and quality of services

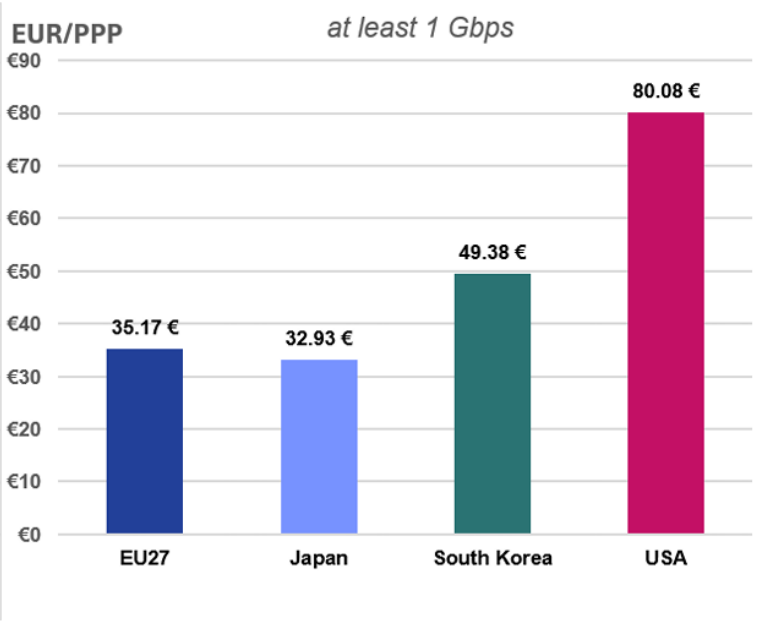
12 indicators included

- Pricing (EU/USA/Japan/Korea):
  - *Fixed* -> 2 speed classes, standalone & triple-play bundles
  - *Mobile* -> 2 traffic consumption baskets
  - EU consistently the cheapest or the second cheapest jurisdiction.
    - #1 for fixed 200-999 Mbps standalone & 3P; #1 for mobile 20GB and mobile 50GB.
    - #2 for fixed 1+ Gbps standalone & 3P.
    - Similar services in the USA cost twice or three times as much as they do in the EU.
- QoS (EU/USA/Japan/Korea/China):
  - In both fixed and mobile, the EU trails in download speed (#5/4), is average in upload (#4/3) and leads in latency (#1).
  - The leading EU Member States rank the best or second best in all indicators.
  - EU vs USA: Fixed → worse download (-35%), worse upload (-9%), better latency (-29%); Mobile → worse download (-41%), similar upload, better latency (-19%).

Pricing and quality of services

Figure 7 – Lowest offers for standalone fixed broadband with speeds of [200Mbps, 1Gbps) and >1Gbps respectively, by jurisdiction

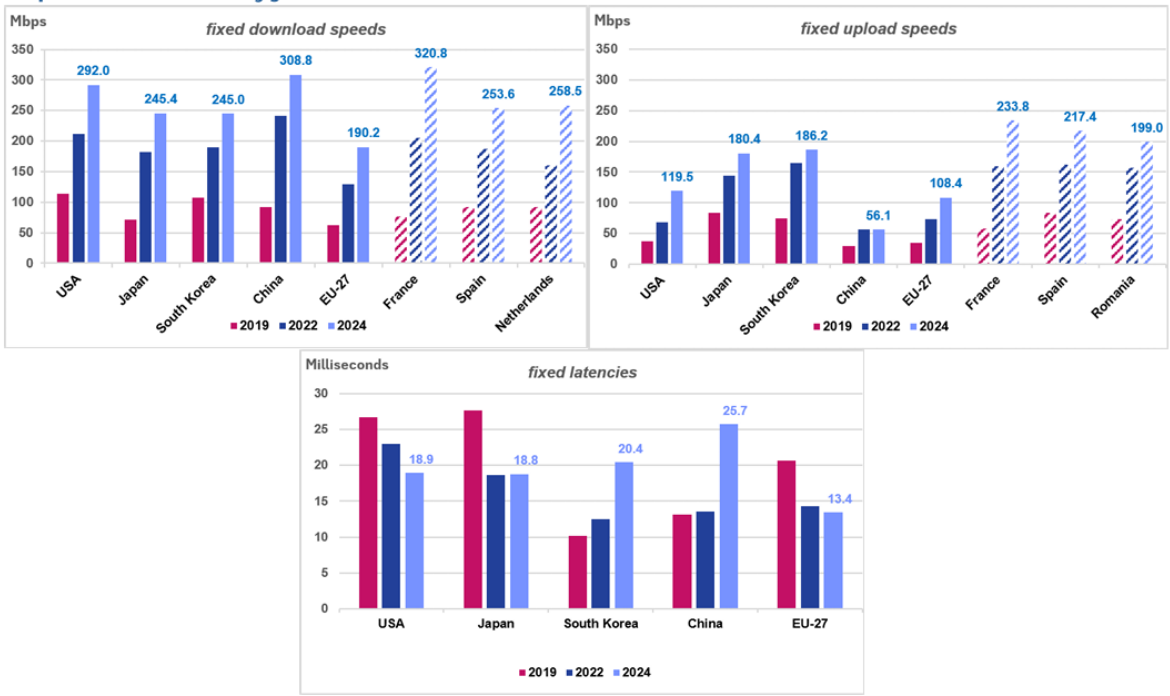




Source: Mobile and Fixed Broadband Prices in Europe reports, 2019-2022.

Pricing and quality of services

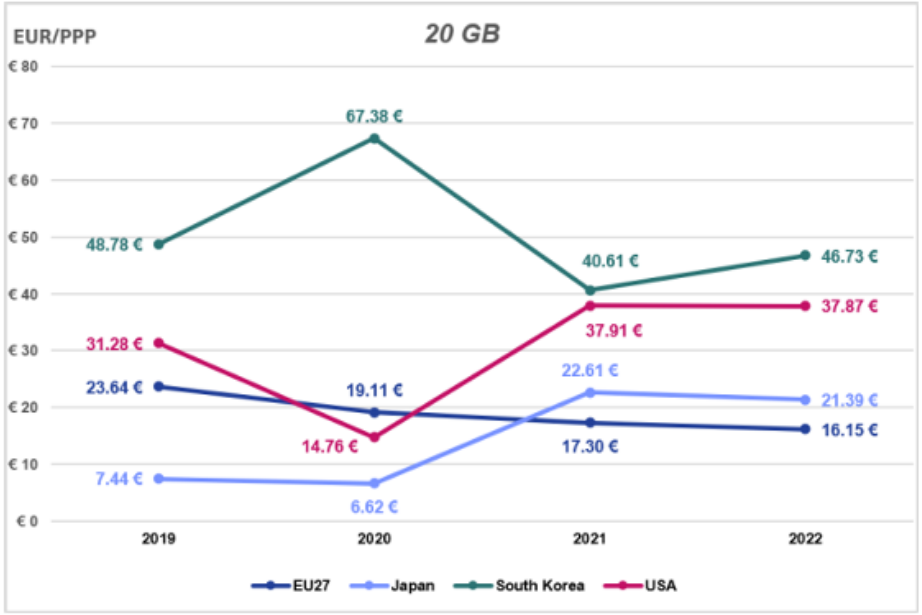
Figure 9 – Evolution of average download and upload speeds, latencies for fixed broadband services, in the period 2019-2024, by jurisdiction

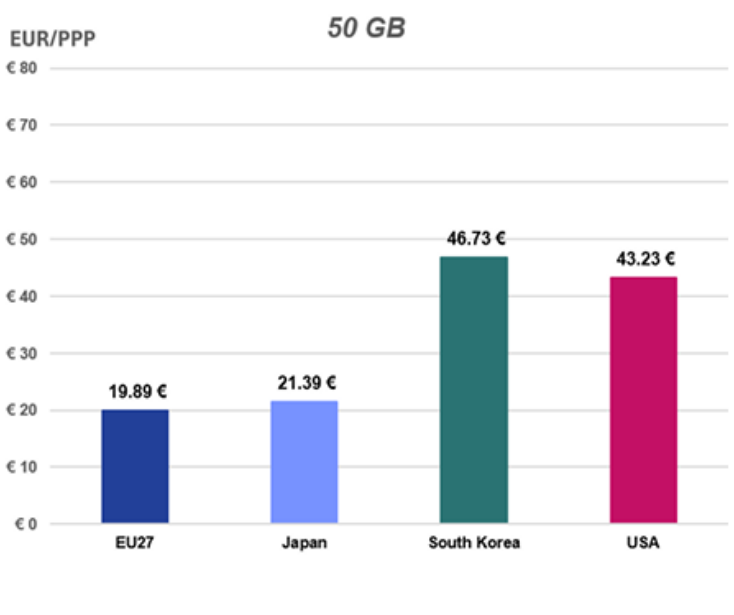


Source: Ookla Speedtest.

Pricing and quality of services

Figure 10 – Lowest offers for mobile data subscriptions of 20GB and 50GB, by jurisdiction

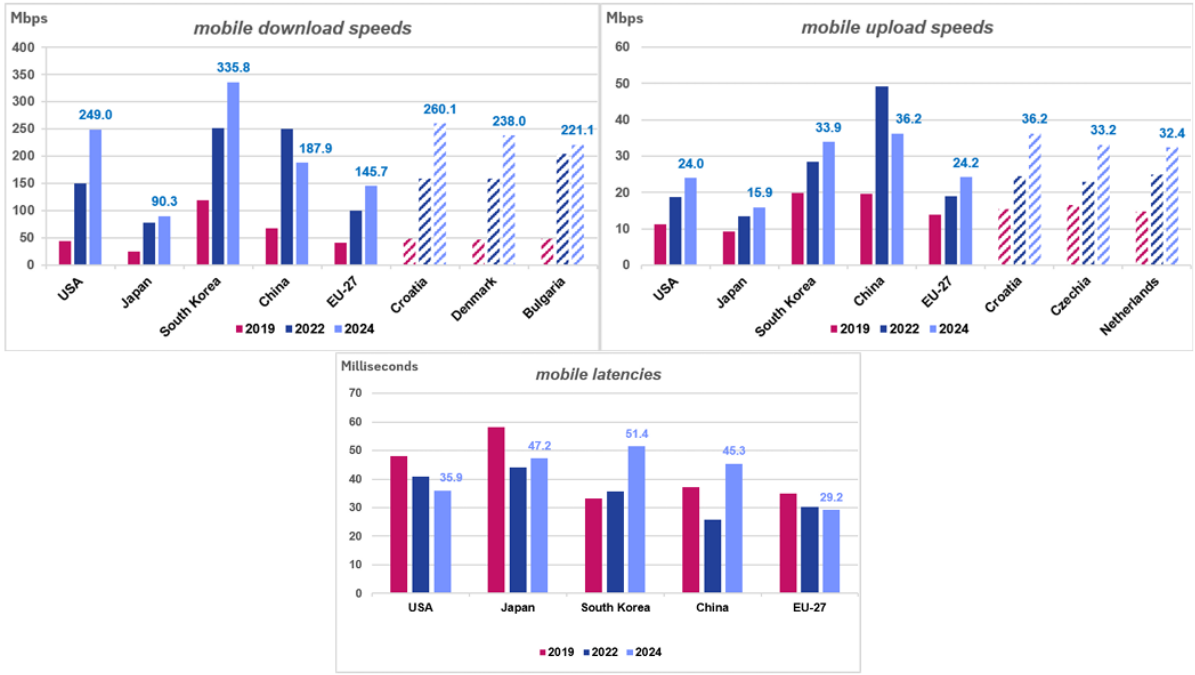




Source: Mobile and Fixed Broadband Prices in Europe reports, 2019-2022.

Pricing and quality of services

Figure 11 – Evolution of average download and upload speeds, latencies respectively for mobile broadband services, in the period 2019-2024, by jurisdiction



Source: Ookla Speedtest.

Urban/rural and consolidation trends

RTR

Urban/rural: The top EU performers are world/OECD leaders.

- Fixed (OECD countries): the average rural coverage figure for the EU-27 is marginally below the OECD average. Broadband coverage in rural regions of the USA slightly outperforms the EU-27 on this measure.
- Mobile (EU/USA/China): the urban/rural divide in terms of 5G coverage in the EU (94/80%) is similar to that in the USA (97/82%) and China (95/85%).

Consolidation trends

- Consolidation is possible under current EU rules, both cross-border and in-country, sometimes subject to remedies.
- Several large operators are exiting secondary markets to refocus on core operations, indicating limited benefits from further scale.
- Evidence shows mergers tend to raise consumer prices, with uncertain effects on investment and innovation.

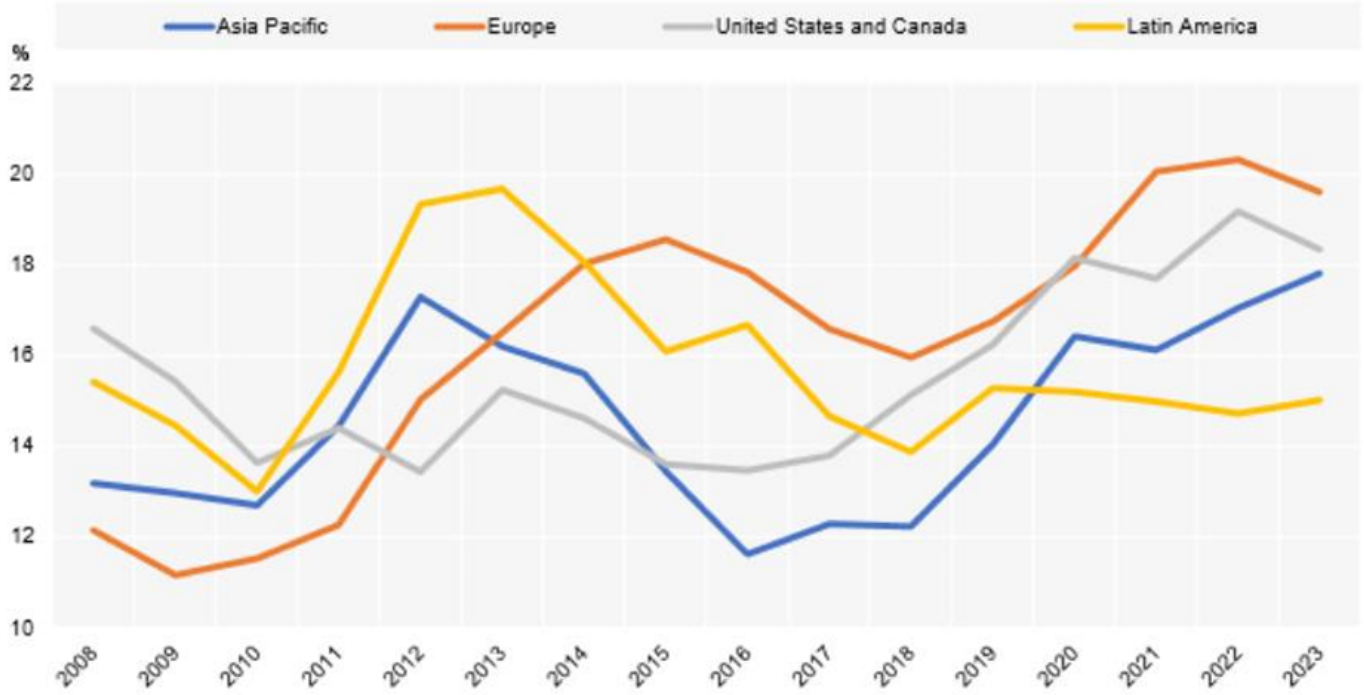
Financial indicators

European operators are overall **financially healthy**. They feature:

- returns above their cost of capital, on average: ROCE vs. WACC
- stable margins: EBITDA margin
- peaking capex: Capex-to-sales ratio
- declining costs: Opex trend
- rising cash flows: FCF-to-sales and FCF outlook
- and positive investor and credit outlooks as fibre and 5G rollouts mature: 5-year shareholder returns; credit ratings.
- Challengers have been major investors in key markets: total capex by operator type.

Financial indicators

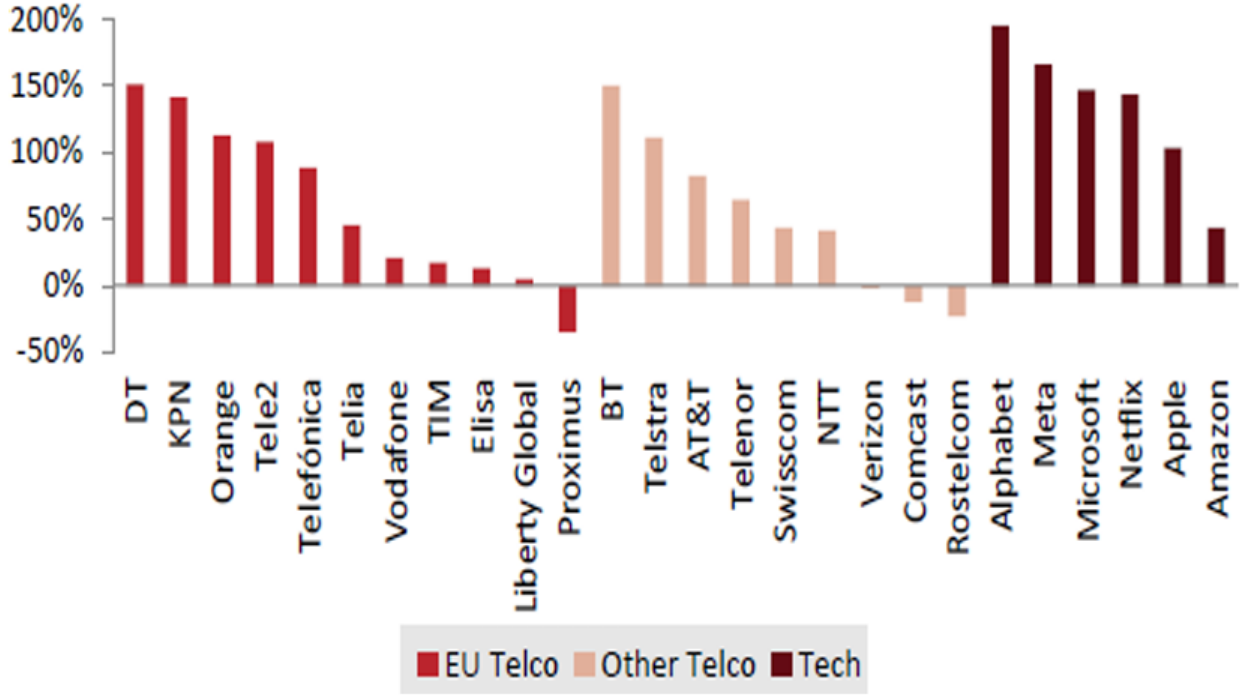
Figure 15 – Capex to revenue ratio of mobile operators in regions of the world



Source: Capex to revenue ratio, OECD Financing Broadband Networks of the Future (2024)

Financial indicators

Figure 17 - Five-year shareholder return (%) of EU and other non-EU operators



Source: Five-year shareholder return (%), EU & other listed telcos, and tech companies (Felten et al. 2025)

Conclusions

(comparatively) **Strong EU telecom performance**: with a unique mix of competitive markets, affordable prices, expanding FTTP/5G coverage and resilient operators, with several MS ranking among global leaders

High value for money: EU broadband prices remain lower than in the USA and South Korea, for comparable services. Although download speeds lag, latency is a clear strength, and top EU countries achieve world-class performance.

Effective EU regulation: the harmonized ex-ante framework supports both competition and connectivity, sustaining market diversity and consumer benefits.

No case for loosening competition: overall, operators remain financially healthy (despite important variation sometimes). BEREC finds **no evidence** that greater consolidation or weaker merger controls would improve investment outcomes.

THANK YOU!

Access regulation

SCOPE: access-regulation models providing context and diversity for the comparisons across the EU, USA, Canada, Australia, China, Japan, South Korea and UK

EU model: coordinated by NRAs under an ex-ante regime (SMP, regular reviews), wholesale access, and a “ladder of investment” principle

Other frameworks: USA: mainly ex-post antitrust; Canada: mixed ex-ante/ex-post; Japan: negotiated access with mediation; Korea: statutory designation of wholesale; UK: EU-style ex-ante; Australia: publicly owned wholesale provider (NBN) with retail competition; China: state-directed infrastructure and administratively licensed access.

Service diversity (now as an annex):

- Fixed: EU: in general, at least four nationwide operators; US: limited no of fixed options; Canada: two fixed networks per area; UK: many retailers via Openreach.
- Mobile: Most jurisdictions have 3 national MNOs; UK has 4; EU MS typically have 3–4, with MVNO shares often 5–20% (USA 7%; Japan/Korea 17%; China 4%).